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**FINAL REPORT FOR THE SAMPLES RECEIVED IN
SEPTEMBER, 2011, FOR SAF F11-146**

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Advanced Technologies and Laboratories International, Inc.

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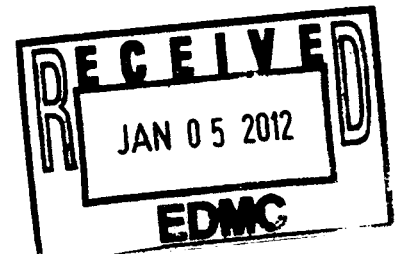
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222-S LABORATORY

FINAL REPORT FOR THE SAMPLES RECEIVED IN SEPTEMBER, 2011, FOR SAF F11-146

1.0 INTRODUCTION

This final report presents the result for the one water sample taken on August 5, 2011. The sample was analyzed in accordance with Sampling Authorization Form (SAF) F11-146 and ATL-MP-1011; *ATL Quality Assurance Project Plan for 222-S Laboratory* (QAPP). The following attachments are included in this report.

- | | |
|--------------|---------------------|
| Attachment 1 | Data Summary Report |
| Attachment 2 | Holding Time Report |
| Attachment 3 | Receipt Paperwork |

2.0 SAMPLE RECEIPT AND HANDLING

The sample was received on September 21, 2011, in good condition and with adequate paperwork.

3.0 ANALYTICAL RESULTS SUMMARY

The Data Summary Report (Attachment 1) present the final analytical results for those analytes requested in the SAF. The "Det Limit" column in Attachment 1 contains the method detection limit (MDL) for non-radionuclide analyses.

In Attachment 1, the column labeled "A#" indicates the aliquot class or the method used for sample preparation before analysis. For analysis without a preparation step, this column is left blank.

Manual calculations using rounded results from the Data Summary Report or result calculation forms may differ slightly from the actual results derived from the raw data.

4.0 CYANIDE

The cyanide analysis by distillation and spectrophotometry was performed on this sample. The SW-846 holding time of 14 days was not met, since sample had already exceeded its holding time by 33 days before being received at 222S on September 21, 2011. All QC requirements of the laboratory QAPP were met.

5.0 PROCEDURES

Table 1 lists the analytical procedure used for analysis of this sample.

Table 1. Analytical Procedures.

Analysis	Preparation Method	Analysis Procedure
Cyanide	LA-695-102 Rev. M-0 SW-846 9010C	LA-695-102 Rev. M-0 SW-846 9014

6.0 REFERENCES

ATL-MP-1011, 2011, *ATL Quality Assurance Project Plan for 222-S Laboratory*, Rev. 10-A, Applied Technologies and Laboratories International, Inc., Richland, Washington.

Sampling Authorization Form F11-056; September 2011– F11-146, 2011, CH2M Hill, Plateau Remediation Company, Richland, Washington.

SW-846, 1986, *Test Methods for Evaluating Solid Waste: Physical/Chemical Methods*, Third Edition, as amended, U.S. Environmental Protection Agency, Washington, D.C.

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Attachment 1

DATA SUMMARY REPORT

WSCF Diversion 2011-09
Data Summary Report

Sample Group: 20111495
Customer Group or SDG Number: 222S20111495
Customer Sample ID: B2FJL9
Customer Sample ID: B2FJL9

Sample#	R	A#	CAS #	Analyte	Unit	STD %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Cnt Err %	Qual Flags
S11M000515			57-12-5	Cyanide	ug/g	93.9	<0.0370	<0.480	<0.480	n/a	n/a	88.3	0.480	n/a	U

Attachment 2

HOLDING TIME REPORT

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222S Workload

Sample Group: 20111495

Ordered by Holding Time

All Hold Times

Holding Time	Sample Group	Sample	Matrix	Method	Prep Method	Sample Date	Received Date	Prep Date	Analysis Date	Missed Holding Time	Days/Hr Remaining	Hold Time
08/19/11 06:30	20111495	S11M000515	SOLID	CN - EDTA		08/05/11 06:30	09/21/11 10:20	N/A	09/22/11 15:00	Y		-34

Attachment 3

RECEIPT PAPERWORK

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ATL	SAMPLE RECEIPT AND CHAIN OF CUSTODY VERIFICATION CHECKLIST			LO-090-101 Rev <u>E.E.O</u>
Date Samples Received: <u>9.21.11</u>		Group #: <u>20111495 1, CN</u>		
Number of Samples: <u>5, 50. L 1, 14 water SAF F11-146</u>				
Sample Custodian: <u>elk</u>				
Sample Custodian to Complete:				
Action	Yes	No	N/A	Comments
RSA/COC provided?	✓			
RSR provided?	✓			
Verify GKI is complete	✓			<input type="checkbox"/> In Project File
Check that outer custody seal is intact, if present			✓	
Record cooler temperature in centigrade, as appropriate	30°C 32°C			<input type="checkbox"/> Check if no cooler and/or no ice
Samples are intact and in good condition	✓			If No, provide comments on back
Verify that COC or RSA is accurate and complete, containing the following information:				
• Client name and client sample number	✓			
• Date and time of sampling	✓			
• Sampling location or origin	✓			
• Container type, size, and number	✓			
• Preservatives (if used) are noted on the COC/RSA and sample bottle	✓			
• Analysis request is clear	✓			
• Signature of persons relinquishing and receiving samples	✓			
• Date and/or time of sample custody exchange	✓			
Verify that sample numbers on containers match the COC and/or RSA	✓			
Samples stored properly (e.g., refrigeration)	✓			
Notify the PM immediately if any problems are noted. (Any "No" checked requires Project Manager resolution.)				
PM to Complete:				
Samples acceptable for release? <u>yes</u> PM Initials <u>GR</u> Date <u>9.21.11</u>				
If No, comment on communication and resolution: <u>G.P.R</u>				
Other Comments:				

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CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F11-146-067-A	PAGE 1 OF 1
COLLECTOR	FM Hall CHPRC	COMPANY CONTACT	LUKE, SN	TELEPHONE NO.	372-1667
AMPLING LOCATION	83.4KW Concrete Floor Sample 13	PROJECT DESIGNATION	183 KE/KW Water Treatment Plant - Concrete		
CE CHEST NO.	0-3 9-21-11 SAT-007	FIELD LOGBOOK NO.	HNF-N-507-23-		
HIPPED TO	0-3 9-21-11 Waste Sampling & Characterization 222-S	OFFSITE PROPERTY NO.	N/A		
PROJECT COORDINATOR		LUKE, SN		PRICE CODE	9C
SAF NO.		F11-146		AIR QUALITY	<input type="checkbox"/> 15 Days / 15 Days
COA		302472ES10		METHOD OF SHIPMENT	GOVERNMENT VEHICLE
BILL OF LADING/AIR BILL NO.		N/A		ORIGINAL	

222S	GAP# 20111495	SAM# 511M000515
POSSIBLE SAMPLE HAZARDS/REMARKS	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	
TRIX*	None	
Preservation	Cool-AC	Cool-AC
Holding Time	6 Months	28 Days/48 Hours
Type of Container	G/P	G/P
No. of Container(s)	1	1
Volume	250mL	60mL
Sample Analysis	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	IC Anions - 300.0 (Chloride, sulfate);
Sample Date	AUG 05 2011	0630
Matrix*	OTHER SOLID	
Sample No.	113060	
Special Handling and/or Storage		

HAIN OF POSSESSION		SIGN/PRINT NAMES		SPECIAL INSTRUCTIONS	
ELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	** The CACN for all analytical work at WSCF laboratory is 402114E520. □ ** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.	
FM Hall	AUG 05 2011 0700	MA1109 SSC #1	AUG 05 2011 0700	(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc};	
ELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Boron, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; 200.8 HG - ICPMS {Mercury};	
MA1109 SSC #1	8-31-11	MA11	8-31-11	(2) Gross Alpha {Gross alpha}; Gross Beta {Gross beta};	
ELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	3 ⁰⁰ sub 1.2.11	
MA11	8-31-11	MA11	8-31-11		
ELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
MA11	8-31-11	MA11	8-31-11		
ELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
MA11	8-31-11	MA11	8-31-11		
ELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
MA11	8-31-11	MA11	8-31-11		
ELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
MA11	8-31-11	MA11	8-31-11		

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME
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